



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6

**1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733**

August 16, 2016

Mr. Gary D. Goeke, Chief
Environmental Assessment Section
Office of Environment (GM-623E)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

RE: Detailed Comment Letter for 2017 – 2022 Gulf of Mexico Outer Continental Shelf Oil and Gas Lease Sales 249, 250, 251, 252, 253, 254, 256, 257, 259, and 261 Draft Environmental Impact Statement (DEIS) for Offshore Marine Environment and Coastal Counties and Parishes of Texas, Louisiana, Mississippi, Alabama, and northwestern Florida

Dear Mr. Goeke:

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the DEIS prepared by the Bureau of Ocean Energy Management (BOEM). The purpose of the proposed project is to explore, develop, and produce oil and natural gas in accordance with the Outer Continental Shelf (OCS) Lands Act of 1953. The DEIS assesses the potential environmental impacts of a range of program alternatives aimed at establishing a schedule that will be used for considering where and when oil and gas leasing may be appropriate over a five year period. Four Action Alternatives and the No Action Alternative are identified. The DEIS analyzes the potential impacts of the proposed actions on air and water quality, coastal habitats, deepwater benthic communities, *Sargassum*, live bottom habitats, fishes and invertebrates, birds, protected species, commercial and recreational fisheries, recreational resources, archaeological resources, human resources, and land use.

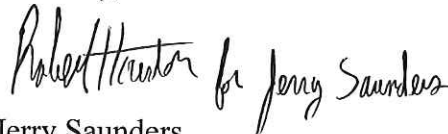
Thank you for the extension of time for EPA to comment on the DEIS. We appreciate BOEM's sending EPA the enclosed Memo outlining the type of analysis BOEM intends to conduct to analyze indirect greenhouse gas (GHG) emissions related to refining, distribution, and end-use combustion of oil and gas produced from the OCS. The BOEM memo states that the analysis will address estimated GHG emissions from active leases from previous Program prior to 2012, leasing under the current 2012-2017 Program, and new leasing proposed under the

2017-2022 Program. We understand that the analysis will be provided in a separate technical report that will be incorporated by reference and summarized in the final EIS.

This type of analysis will provide more complete information on indirect impacts of the leasing program and allow for better informed decision-making. The approach preceded the Council on Environmental Quality's August 1, 2016 Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews which should also be followed. We appreciate BOEM undertaking this analysis, which is called for under NEPA, and is particularly appropriate here because the potential indirect GHG emissions associated with the processing, distribution, and end-use consumption of oil and gas produced on the OCS are likely to be significant. While the general approach outlined in the Memo and the analysis that BOEM expects to complete will result in a much more informed analysis, the DEIS as submitted does not contain sufficient information on indirect GHG emissions for EPA to fully assess the environmental impacts of BOEM's Preferred Alternative (Alternative A), so EPA has rated the DEIS as "EC-2" (Environmental Concerns/Insufficient Information). EPA's Rating System Criteria can be found here: <http://www.epa.gov/oecaerth/nepa/comments/ratings.html>. Detailed comments are enclosed with this letter for your consideration.

Thank you for the opportunity to comment on the DEIS. EPA will review the forthcoming technical analysis and final EIS related to this project when they are completed. If you have any questions or concerns, please contact Kimeka Price at (214)665-7438 or via email at price.kimeka@epa.gov for assistance.

Sincerely,

A handwritten signature in black ink that reads "Robert Hunter for Jerry Saunders". The signature is written in a cursive, flowing style.

Jerry Saunders
Chief
Water Enforcement Branch

Enclosures

**DETAILED COMMENTS
ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE
BUREAU OF OCEAN ENERGY MANAGEMENT
2017 – 2022 GULF OF MEXICO OCS OIL AND GAS
LEASE SALES 249, 250, 251, 252, 253, 254, 256, 257, 259, AND 261
IN
TEXAS, LOUISIANA, MISSISSIPPI, ALABAMA, AND NORTHWESTERN FLORIDA**

EPA offers the following comments for BOEM's consideration in preparation of the Final Environmental Impact Statement (FEIS):

Environmental Justice (EJ) and Surrounding Communities

In the Executive Summary, the DEIS identifies the affected environment of analysis to encompass 133 counties and parishes in five states with over 22.7 million residents. Also, it states the impacts of the proposed action would be immeasurable for environmental justice since low-income and minority communities are located on-shore, distant from Federal OCS oil and gas-related activities. Further, BOEM has determined that the proposed action would not produce environmental justice impacts, since these vulnerable populations are located within the larger context of on-shore and State-regulated nearshore oil and gas activities that are connected to downstream infrastructure over which BOEM has no regulatory authority. Table 1 identifies environmental justice impacts to be minor.

Recommendation:

EPA recommends utilizing the Promising Practice Report (https://www.epa.gov/sites/production/files/2016-5/documents/iwg_promising_practices_final_5-16-2016.pdf) to supplement the applicable requirements for considering and analyzing environmental justice populations.

We recommend the FEIS accurately discuss impacts to environmental justice and Tribal populations, within, along the boundaries, and near the proposed action's operations and activities.

EPA recommends consolidated discussions of direct, indirect, and cumulative impacts to EJ and Surrounding Communities and proposed mitigation thereby making it readily accessible and in layman's terminology.

We recommend utilizing EJ tools and methods (i.e. EJ Screen, U.S. Census Bureau, and area knowledge) in identifying the low income and minority population within or near the

proposed project boundaries, and avoid the use of averaging in determining environmental justice population or communities.

EPA recommends consideration of public comments in the selection of an alternative that minimize any disproportionately high and adverse human health or environmental impacts on minority and low-income populations or individuals.

National Pollutant Discharge Elimination System (NPDES)

The DEIS states that the Bureau of Safety and Environmental Environment (BSEE) “performs NPDES inspection on behalf of the USEPA for production platforms and drilling rigs through a 1984 Memorandum of Understanding between the U.S. Department of the Interior, the USEPA, and the U.S. Department of Transportation (USDOJ, MMS, 1983) and a 1989 Memorandum of Agreement between MMS (BSEE predecessor) and the USEPA Region 6 (USDOJ, MMS, 1989).” *See* p. 3-55. Also, it states that “Produced water may be discharged if the oil and grease concentration does not exceed 42 milligrams per liter (mg/L) daily or 29 mg/L monthly average. The discharge must also be tested for toxicity.” *See* p. 3-61.

Recommendation:

EPA recommends the statement referenced on page 3-55 start with “BSEE performs NPDES inspections on behalf of USEPA Region 6 for production facilities.....” It is later clarified that BSEE only conducts NPDES inspections in Region 6 jurisdictional waters, however to make this more clear, the above text is recommended.

We recommend the above text on page 3-61 include a statement that toxicity is primarily for chronic exposure but can include acute exposure.

Well Stimulation

The DEIS notes reliance on Boehm et al. (2001) for information relating to well stimulation activities in offshore drilling/production in the Gulf of Mexico (GOM). This study discusses the completion, stimulation, and workover chemicals that are used in the GOM. *See* p. 3-64. The Boehm et al. (2001) study outlines a wide variety of chemicals used during the oil and gas extraction process. EPA notes that BOEM is proposing to update this study and has included a proposal to update the study in the 2015-2017 Study Development Plan.

Recommendation:

EPA recommends the inclusion of trend information pertaining to the volumes of well stimulation fluids used in well development, any available information on the formulation

of these fluids, fate and transport, and other updated outcomes and issues relating to the Boehm study.

Wetlands

EPA has noted in several past EISs that coastal wetland systems in the Gulf of Mexico are very sensitive systems that are increasingly stressed from all types of activities including but not limited to coastal development, maintenance dredging of channels, and oil and gas development. These systems are also stressed due to natural events such as hurricanes. Stresses on these systems are only predicted to increase with climate change and sea level rise.

A report by Stedman and Dahl (2008) on the status and trends of wetlands in coastal watersheds states that the “Gulf of Mexico coastal watersheds exhibited substantial losses in freshwater wetlands. This rate of loss was 6 times higher than the rate of freshwater vegetated wetlands losses in the Atlantic coastal watersheds. The estimated losses for all wetland types in the Gulf of Mexico were 25 times higher than those estimates for the Atlantic over the course of this study.”¹ This report also indicates that coastal areas along the panhandle of Florida, Alabama, Mississippi, Louisiana, and Texas are listed as areas of greatest coastal wetland loss in the Gulf of Mexico and that a “majority of the coastal wetland loss (61,800 acres per year) from 1998 to 2004 occurred in the Gulf of Mexico.” EPA notes BOEM’s efforts to better quantify historical wetland losses for coastal areas in the Gulf of Mexico, the inclusion of State specific information on the status and trends of coastal wetland systems in Chapter 4 of the EIS, and the evaluation of several recent studies looking at the impacts of the Deepwater Horizon spill on these coastal systems.

In Section 4.3.1 Estuarine Systems (Wetlands and Seagrass/Submerged Vegetation), Table 4-4 identifies routine impacts as negligible for pipeline construction and maintenance, navigation channel maintenance dredging, vessel operation, disposal of OCS oil- and gas-related wastes, and construction and use of coastal support infrastructure under Alternatives A, B, C and D. However, on page 4-56 and 4-57, the DEIS states that one (1) pipeline construction resulting in 12 - 20 acres of ‘land loss’ is expected without modern techniques (e.g., trenchless construction) or mitigation. It is unclear how the impacts are deemed negligible.

Trenchless or modern techniques are only required for ‘crossing barrier island and shore faces’, and the expected impact is negligible. The DEIS identifies access and staging areas for trenchless construction will entail impacts. The Lease Stipulations in Appendix D and the discussions in Section 2.2.4 (Mitigation Measures) does not discuss the requirement to use modern techniques for new pipeline construction. Additionally, Appendix B mitigation measures for pipelines relates solely to deep water construction and does not indicate any measures

¹ Stedman, S. and T.E. Dahl. 2008. Status and trends of wetlands in the coastal watersheds of the Eastern United States 1998 to 2004. National Oceanic and Atmospheric Administration, National Marine Fisheries Service and U.S. Department of the Interior, Fish and Wildlife Service. (32 pages)

required for pipelines in coastal habitat. Further, it appears the DEIS does not fully evaluate new pipeline construction for more inland coastal habitats and wetlands.

Recommendation:

EPA recommends the FEIS clarify how the pipeline construction and operation mitigation measures required of lease operators will be enforceable.

We recommend the FEIS commit to implementation of mitigation measures for all pipeline construction and operations activities in coastal habitats.

EPA recommends the FEIS clarify the basis of negligible impact for pipeline construction and maintenance.

On pages 4-81 and 4-82 under the Vessel Traffic and Dredging Section, the DEIS identifies the waves generated by boats, ships, barges, and other vessels erode unprotected shorelines and accelerate erosion in coastal barrier beaches already affected by natural erosion processes. Also, it states that the existing armored navigation channels minimize or eliminate the potential for shoreline erosion from vessel traffic. The DEIS identifies the impact of erosion of coastal barrier beaches and associated dunes from vessel traffic to be negligible, and maintenance dredging to be minor.

Recommendation:

EPA recommends the FEIS provide specifics on existing navigation channels which are armored and not armored in order to fully evaluate impacts from vessel traffic and dredging.

On page 3-4, the DEIS states pipeline capacities are unknown. On pages 3-38 and 3-42, it identifies a mature pipeline network exists in the GOM to transport oil and gas production from the OCS to shore, and projects that the majority of new pipelines would connect to the existing pipeline infrastructure. Additionally, on page 3-35, the DEIS projects that the number of pipeline removals or relocations would increase region-wide as the existing pipeline infrastructure ages. EPA recommends the EIS incorporate specifics on the age, condition, and likely need to replace or rebuild these existing pipelines due to the increased activity from the proposed action and the assessment of negligible impact.

On page 4-59 under Onshore Facilities, the DEIS states that all new facilities attributed to the OCS Program are described in Section 3.1.7 Coastal Infrastructure, which included 0 – 1 gas processing plant. Also, it states any large construction project in the coastal zone is likely to impact some wetland acreage, and any impacts upon wetlands are mitigated in accordance with the Clean Water Act requirements, Corps of Engineers' 404 Permit, and State permitting

requirements. Further, the DEIS states that since no new facilities are estimated with the proposed action and any possible impacts would be mitigated, the impact would be negligible.

On page 4-66 under Coastal Infrastructure and Pipelines, the DEIS states activities that would further contribute to wetland loss include additional construction of access channels to shoreline staging areas and expansion of onshore and offshore facilities. It further projects 0-1 new gas processing facility and 0–1 new pipeline landfall. The DEIS identifies that if a new facility is constructed and a pipeline makes landfall, any impacts to wetlands would be mitigated.

Thus, it appears BOEM is relying on mitigation under the Clean Water act requirements, Corp. of Engineers' 404 Permit, and State permitting programs for any potential reduction or mitigation of impacts. Also, it appears the DEIS has conflicting statements on whether new facilities are included with the proposed project. Please clarify in the final EIS.

Marine Coastal

In Section 4.3.1.2 Disposal of OCS-Related Wastes, Trash, and Debris and Section 4.3.2.2 Environmental Consequences, the DEIS states that “BOEM and BSEE have addressed the marine debris issue by imposing marine debris awareness and prevention measures on the oil and gas industry through NTL 2015-BSEE-GOE, which provides guidance to the industry operators regarding dumping trash and debris into the marine environment and informs operators of regulations set by other regulatory agencies (i.e., the USEPA and USCG). Because of the mitigations and awareness, OCS oil- and gas-related trash and debris from a proposed action would result in negligible impacts to estuarine habitat.”

In the absence of data to substantiate the effectiveness of these measures, it is unclear how the basis of negligible impact was determined. The impacts of trash and debris on aquatic ecosystems, particularly with regard to micro-plastics are being studied more intensely, and plastic is now found throughout the world's oceans.

Recommendation:

EPA recommends analyzing trend data on oil and gas-related debris washing up on beaches to support the qualitative evaluation. Amounts of vessel and platform litter released to the ocean were estimated as far back as at least thirty years ago by such organizations as the National Academy of Sciences, the Marine Mammal Commission, NOAA and others. More recent studies and beach debris catalogs are available for comparison and trend analysis.

Air Quality

In Table 1 Alternative Comparison Matrix, air quality impacts are identified as minor for all four Alternatives. However, in Section 4.1.2 Environmental Consequences relating to Air Quality, the DEIS discussed the incomplete and unavailable information needed to assess the impacts from OCS oil and gas-related activities. It also states that the air modeling study results that are necessary to determine if lease sale emissions adversely impact the State/seaward boundary or the shoreline are unavailable. Further, the DEIS identifies that a contract exists to obtain information and the results should be available in the future EIS documents. Thus, there is inadequate information to assess impacts to air quality.

EPA's previous air quality impact comments on the BOEM lease sale EISs have focused generally on mitigation, greenhouse gas emissions, cumulative impacts, emissions above the significant impact level, and on the air quality offshore modeling analysis performed by BOEM.

EPA notes that BOEM is updating the off-shore air quality inventory and impact modeling to substantiate its NEPA decisions and that modeling results will be available after the release of this DEIS. EPA plans to coordinate with BOEM on review of modeling results between the issuance periods of the DEIS and FEIS and will provide additional comments on air quality during the review of the FEIS.

Climate Change and Greenhouse Gases (GHG)

In Section 3.1.8.6 Greenhouse Gases, the DEIS does not quantify GHG emissions and does not include a qualitative discussion of climate change impacts associated with the OCS and non-OCS oil- and gas-related operations and activities. On page 4-12, Table 4-1 identifies GHG impacts as minor for Alternatives A, B, C and D. On page 4-34, EPA notes that BOEM is updating air quality inventory and impact modeling to substantiate its NEPA decisions, and that modeling results will be available after the release of this DEIS. EPA plans to coordinate with BOEM on review of modeling results between the issuance periods of the DEIS and FEIS and will provide additional comments on air quality during the review of the FEIS.

Recommendation:

EPA recommends the FEIS estimate the direct and indirect GHG emissions caused by the proposed project and its alternatives, including a discussion of the incremental impacts of the estimated GHGs and an analysis of reasonable alternatives and/or practicable mitigation measures to reduce project related GHG emissions.

We recommend considering climate adaptation measures based on how future climate scenarios may impact the project in the FEIS. The National Climate Assessment (NCA), released by the U.S. Global Change Resource Program², contains scenarios for regions

² <http://nca2014.globalchange.gov/>

and sectors, including energy and transportation. Using NCA or other peer reviewed climate scenarios to inform alternatives analysis and possible changes to the proposal can improve resilience and preparedness for climate change.

Mitigation Measures

In Sections 2.2.4.2 Pre-lease Mitigating Measures by Alternative and 2.2.4.3 Post-lease Mitigating Measures, the DEIS discusses mitigating measures that could be applied at the pre-lease stage and during site-specific plan and/or permit reviews. Further, Appendix B identifies commonly applied mitigating measures that could apply. Specific measures were not identified.

Recommendation:

EPA recommends the FEIS clarify the specific mitigation measures and incorporate a commitment to implement mitigation measures selected to reduce or avoid any adverse impacts from the proposed project.

Hazardous and Solid Waste

The DEIS discusses the proposed action's OCS and non-OCS oil- and gas-related construction and operations.

Recommendation:

EPA recommends the FEIS identify projected solid and hazardous waste types and volumes, and expected storage, disposal, and management plans, and appropriate mitigation to minimize the generation of hazardous waste (i.e., hazardous waste minimization).

Biological Habitats

The DEIS identifies BOEM initiated formal consultation with U.S. Fish and Wildlife Service (USFWS). However, the DEIS does not contain a final determination on the environmental consequences of the alternatives.

Recommendation:

EPA recommends the incorporation of USFWS and other State Agencies concurrence on impacts of the proposed project, and a commitment for mitigation, if applicable.

Transportation and Traffic

In Table 1 Alternative Comparison Matrix, land use and coastal infrastructure impacts are identified as major for all Alternatives. In Section 3.1.7 Coastal Infrastructure, the DEIS describes the potential need for new facility construction and for expansions at existing facilities, and transportation services involving both onshore and offshore activities. On page 4-378 and 4-379, it discusses that railways and major interstates are critical to the success of service bases and port facilities. It is unclear the extent and magnitude of transportation and traffic impacts.

Recommendation:

EPA recommends the FEIS clarify transportation and traffic impacts and identify any committed mitigation.

Consultation and Coordination with Indian Tribes

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249; November 6, 2000), requires regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Indian tribes. The DEIS states the analyzed environmental justice issues for minority and low-income populations is broadly applicable to federally recognized Indian Tribes. Further, it states there is ongoing discussions with designated Tribal representatives.

Recommendation:

EPA recommends the FEIS include updated and completed descriptions of consultation and coordination activities, including correspondence to and from Tribal governments and other consultation-related documents. These documents would demonstrate fulfillment of Tribal consultation duties by the lead agencies and Tribal government engagement.

National Historic Preservation Act Section 106 Consultation

In Table 1 Alternative Comparison Matrix, archaeological resources impacts are identified as negligible under all four Alternatives. However, in Section 4.13, the DEIS identifies various scenarios where the potential impact could range from beneficial to major. Further, it states that it is impossible to evaluate the potential impact to an archaeological site from a project action at the programmatic level, and each permitted action during post-lease activities would be assessed for site-specific impacts during the permit application process.

Recommendation:

EPA recommends the FEIS includes, as applicable, State and Tribal Historic Preservation Officers concurrence and incorporate any issues raised by the State and Tribal Historic Preservation Officers, as applicable, in Louisiana, Texas Mississippi, Alabama, and Florida, and how the impacts will be addressed and/or mitigated.